REMARKS/ARGUMENTS

Upon entry of this amendment, claims 1, 9, 10 and 13 have been amended and claims 1-18 remain pending.

35 USC 102 Rejection

Claims 1 and 13 are rejected under 35 USC 102(e) as being anticipated by Chew (U.S. Pat. No. 6,343,260). For at least the reasons set forth below, Applicant respectfully traverses the foregoing rejection and submits that claims 1 and 13 are patentable over the cited art.

With respect to claim 1, Chew does not disclose or suggest a number of features as recited in claim 1. The claimed invention as recited in claim 1 is different from Chew in a number of respects. For example, Chew generally teaches a test system which verifies the ability of the USB devices to provide correct responses to a set of standard device requests and Chew does not disclose or suggest any test device. The claimed invention as recited in claim 1, on the other hand, does not perform any testing on a USB device; instead, a test device is used to test the USB host controller and the USB port on a host computing device.

Chew also teaches a test system which verifies the implementation of the USB architecture framework support in a computer system. The USB Architecture (USBA) consists of a library of interfaces which provide channels of communications between a USB client driver and an associated USB device. More specifically, the test system performs calls to the USBA interfaces and then decodes and validates test parameters to determine whether they are valid. That is, the USB client driver is tested to verify that it functions properly in response to USB interface function calls. However, testing the USB client driver is not the same as testing the USB host controller and the USB port.

Even though Chew also teaches a command line interpreter, the use of such command line interpreter does not disclose or suggest testing of the USB host controller and the USB port.

Hence, for at least the reasons set forth above, claim 1 is patentable over the cited art.

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With respect to claim 13, the same arguments and rationale as discussed in connection with claim 1 above similarly apply with equal force. Hence, claim 13 is also patentable over the cited art.

35 USC 103 Rejection

Claims 2-12 and 14-18 are rejected under 35 USC 103(a) as being unpatentable over Chew. For at least the reasons set forth below, Applicant respectfully traverses the foregoing rejection and submits that claims 2-12 and 14-18 are patentable over the cited art. It should also be noted that these claims depend, either directly or indirectly, from claims 1 or 13 and hence at least derive patentability therefrom.

With respect to claims 2-12 and 14-18, these claims would not have been obvious at the time the invention was made. As noted by the Examiner, various tests as recited respectively in these claims are not disclosed by Chew. Furthermore, there is no suggestion that the testing of the standard device requests and the USBA interface commands would render the various tests as recited respectively in these claims obvious.

For example, with respect to claim 2, Chew does not suggest performing a voltage level test. Testing standard device requests and the USBA interface commands is not the same as performing a voltage level test. The voltage level of a USB port is not related to any standard device request or USBA interface command. Hence, claim 2 is patentable over the cited art.

With respect to claim 3, Chew does not suggest performing a full speed device detect test. The fact that the user can switch between ports for testing different devices is irrelevant. The full speed device detect test is performed to verify that the USB port is capable of handling a USB operating at full speed. Switching ports for testing is not the same as performing a full speed device detect test. Hence, claim 3 is patentable over the cited art.

With respect to claims 4-7, Chew does not suggest performing the respective tests recited in these claims. It is unclear how testing the commands "get_interface" and "synch_frame" would suggest performing the frame timing check, the bus signal and power voltage test, the bulk transfer test and the isochronous transfer test as recited respectively in claims 4-7. Furthermore, Chew never contemplates the use of a test device that can provide

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testing for a number of USB features in a single setting. For example, there is no way for a system to verify frame timing, bus signal levels or power levels without a test device as contemplated by the present invention. Bulk transfer testing is also impractical under Chew because without a test device that can actually accept and verify the consistency of bulk and isochronous transfers, there is no practical mechanism to confirm that the transfers completed successfully or took place at all. Chew also provides no mechanism for confirming that such functions occur within the constraints of the USB specifications, but merely relies on observing successful transactions to assume that it is likely that USB specification criteria are met. Observing successful transactions is not always reliable. For example, if both the USB device and the USB host computing device happened to have the same error that was outside of the USB specification limits, they would still be able to communicate with each other; however, they would be unable to communicate with other USB devices that operated within the USB specification limits. Hence, claims 4-7 are patentable over the cited art.

With respect to claims 8 and 9, Chew does not suggest performing the respective tests recited in these claims. It is unclear how testing the commands "get_interface" and "start_polling" would suggest performing the interrupt transfer test and the low speed device detect test as recited respectively in claims 8 and 9. Chew never contemplates confirming the proper functioning of the USB interface and assumes that the interface operates correctly. Merely using the functions "get_interface" and "start_polling" will not confirm that interrupt transfers are taking place properly, timed or at all. Furthermore, low speed device detection as contemplated by Chew will only occur for low speed USB devices, and similarly, high speed device detection for high speed USB devices. However, both types of detection are not intended for a single USB device because Chew never contemplates the need for the USB device to enter both modes of operation. Hence, claims 8 and 9 are patentable over the cited art.

With respect to claim 10, the same arguments and rationale as discussed in connection with claims 1, 2, 4, 5 and 13 above similarly apply with equal force. For example, the test device as recited in claim 10 can be used to perform a voltage level test, a frame timing check and a bus signal and power voltage test. Upon review of the cited excerpts, no such device

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capable of performing the foregoing tests is disclosed or suggested in Chew. Hence, claim 10 is patentable over the cited art.

With respect to claim 11, the same arguments and rationale as discussed in connection with claims 3 and 6-9 above similarly apply with equal force. For example, the test device as recited in claim 11 can be used to perform a full-speed device detect test, a bulk transfer test, an isochronous transfer test, an interrupt transfer test and a low-speed device detect test. Upon review of the cited excerpts, no such device capable of performing the foregoing tests is disclosed or suggested in Chew. Hence, claim 11 is patentable over the cited art.

With respect to claim 12, claim 12 depends from claim 10 and hence at least derives patentability therefrom. Hence, claim 12 is patentable over the cited art.

With respect to claims 14 and 15, the same arguments and rationale as discussed in connection with claims 2-9 above similarly apply with equal force. Hence, claims 14 and 15 are patentable over the cited art.

With respect to claims 16 and 17, claims 16 and 17 depend from claim 13 and hence at least derive patentability therefrom. Hence, claims 16 and 17 are patentable over the cited art.

With respect to claim 18, Chew does not disclose or suggest testing a USB cable. Hence, claim 18 is patentable over the cited art.

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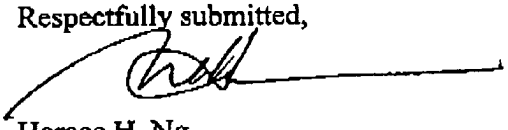
CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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